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RESEARCH PAPER

'When I tried to explain, they shouted back at me!': exploring how community pharmacists navigate tensions implementing antimicrobial stewardship in Vietnam

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ABSTRACT

Antimicrobial resistance is a major global and national health challenge, accelerated by 'irrational' antibiotic use. In response, Vietnam has been implementing a public health plan of antimicrobial stewardship since 2013 to reduce antibiotic sales in community pharmacies, although it has had limited effect. Given that private pharmacies are increasingly the entry point to access healthcare, reflective of the inhibited accessibility of primary healthcare, understanding how the positioning of community pharmacists shapes the delivery of antimicrobial stewardship plans warrant further investigation. This qualitative analysis draws on data from 24 in-depth interviews with licensed community pharmacists in Vietnam. Interviewees described being constrained in rationing the sale of antibiotics by tensions within their professional role, in which the delivery of antimicrobial stewardship within their public health commitments rubs up against commercial and social obligations to their livelihoods and communities respectively. The concept of 'resistance' provides insight into what obstructs the integration of national antimicrobial stewardship guidance and policy, hindering the transformation of local practices concerning antibiotic sales at the community level. Findings reveal opportunities to recast community pharmacists as 'productive anchors' who can facilitate the appropriate use of antibiotics and strengthen links to primary care within the local context. Structural changes are needed, however, so that people do not use antibiotics as a proxy for health care. Improving the accessibility of primary healthcare would also curtail the reliance on community pharmacists' to dispense antibiotics as a local mechanism of financial protection and social care within community.

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Introduction

Antimicrobial resistance (AMR) is a major global and national health challenge. It is currently a leading cause of death globally, with a projected mortality burden greater than that of HIV or malaria (Murray et al., 2022). A primary accelerant of AMR in humans is the 'irrational'[1] use of antibiotics in in- and out-patient healthcare settings. A dominant policy focus to redress this is antimicrobial stewardship (AMS), which seeks to 'rationalize' (reduce or optimize) antibiotic use. Proposed in the 2015 World Health Organization (WHO) Global Action Plan on AMR to promote optimal use within and beyond health facilities (WHO, 2015), AMS has subsequently been adopted widely across the world. Low- and middle-income countries (LMICs) have been identified as particular targets for AMS implementation because of their over-stretched health systems which had led to widespread noncompliant prescribing and dispensing practices, making it more difficult to implement the strict oversight and control of antibiotics.

AMS has been implemented in hospital (in-patient) and community (out-patient) settings. Within out-patient settings, pharmacists are considered key mediators to address 'problematic' and 'irrational' dispensing practices and important gatekeepers or 'guardians' of antibiotics to promote more judicious consumption of antibiotics at a community level (Lambert et al., 2022; Wilkinson et al., 2019). Their inclusion in AMS policy implementation is indicative of their historical involvement in public health programs, especially in LMIC contexts (Strand et al., 2016). However, there remains a limited evidence-base demonstrating the positive effect of utilizing community pharmacists for public health. Much of the policy investment is based in a logic which emphasizes their potential contribution rather than realized practice (Gebresillassie et al., 2023).

AMS, community pharmacists, and presumed pathway to change

There are two key tenets underpinning AMS policies. The first is improved knowledge to change practice. Community-based AMS comprises a core educational component, in the form of disseminating and training guidelines of clinical management and regulatory documents (Darj et al., 2019). AMS aims to 'tame' the practice of non-prescription based dispensing of antibiotics by targeting community pharmacists to correct knowledge and restrict antibiotics sale/supply is embedded within the behaviour change paradigm (Broom et al., 2021). Informed by a knowledge-deficit model, the implicit logic is that improved awareness and knowledge will lead to changes in practice among antibiotics dispensers (Will, 2018), which will in turn enable consumers to be better educated leading to more rationed use with cascading effects for the wider community (Kerr et al., 2021). The second tenet is the enforcement of the regulatory use of prescription to limit the inappropriate sale of antibiotics at private pharmacies (Auta et al., 2019). Legislation prohibiting the supply of antibiotics without prescription has been vigorously promoted for countries with weaker healthcare systems (Sulis & Gandra, 2021).

Evidence indicating the effectiveness of these approaches remains limited. In a recent systematic review, educational interventions targeting community pharmacists have been shown to have mixed effects on antibiotic prescribing/dispensing (Lambert et al., 2022). Antibiotic prescription mandates have shown short-term reductions, yet the degree of effect varies across contexts (Jacobs et al., 2019), and the sustained impact of prescription mandates remains unproven (Lam et al., 2021). There is emerging evidence that antibiotic dispensing/supply is most reduced where both educational and restrictive strategies were combined (Lam et al., 2021; Wilkinson et al., 2019), but the reasons why have received little attention. While this interaction remains under-explored, a broader concern is whether the focus on these twinned approaches education and law enforcement may have diverted attention away from concomitantly considering how to adapt AMS policies to address the structural drivers of consumption practices.

Broadening considerations of 'rationality'

Qualitative research has informed our understanding of the broader 'drivers' of antibiotic use (Tompson & Chandler, 2021), demonstrating that consumption and dispensing are commonly a response to adverse structural conditions (Broom et al., 2020; Dixon et al., 2021). By focusing on users' 'situated rationalities' (Lawson, 1997), social scientists have resisted the narrow biomedical framings of '(ir)rationality' and highlighted the neglect of wider roles that antibiotics play in social, political and economic life (Van der Geest & Whyte, 1989; Whyte et al., 2002). Yet the extent to which AMS can attempt to penetrate and modify such practices, when considered within this broader context, continues to receive relatively limited attention.

Targeting community pharmacists in AMS policy in Vietnam

Vietnam is, among many LMIC countries, facing challenges of prolific consumption and sale of antibiotics (Mao et al., 2015). AMS has become an important component within the 2013's AMR National Action Plan of Viet Nam to tackle AMR in humans (WHO, 2016). The global AMS template has been adopted to reduce antibiotic use, which includes investing in interventions that place greater focus on educating and controlling practice dispensers (WHO, 2021). However, reflecting global patterns among resource-constrained settings, Vietnam has experienced slow progress in addressing antibiotic misuse in communities.

An identified practice of particular concern is self-medication with antibiotics in communities (Donisi et al., 2019; WHO, 2015). This is enabled in part by widespread antibiotic sales without a prescription in community pharmacies, which although illegal in Vietnam is common practice (Nguyen et al., 2020; Zawahir et al., 2022). Corrective AMS intervention through educating community members, pharmacists and health workers is a key component of Vietnam's community AMS policy (Chua et al., 2021). Key activities include annual workshops and training on AMS for community pharmacists and public AMR awareness campaigns (News Center VTV24, 2016).

A second essential component of Vietnamese AMS is enacting prescription-only regulation. However, although these restrictions are embedded in 2005 drug law and legal accreditation as 'Thuc hanh tot nha thuoc' (Good Pharmacy Practice), enforcement of this legislation is lax (Nga et al., 2014). Despite Vietnam being a known authoritarian state, the lack of enforcement power and capacity illuminates the scale of the challenge of regulation and the complexity of state control in intervening in the landscape of antibiotic access within the drug market.

Situating community pharmacies within the local healthcare systems in Vietnam

In order to explore community pharmacist's engagement with national AMS policy it is critical to contextualize the local health system within which community pharmacists operate. Vietnam has a four-level healthcare system (central, provincial, district and commune) with primary health services mainly delivered through community health centers at commune levels, and in part district hospitals. Since the 1980s, under Doi Moi neoliberal reform-, the State has allowed private healthcare and the pharmaceutical sector to flourish, with a shifting emphasis away from tight control to an increasing promotion of self-reliance to protect citizens' health (Nguyen et al., 2017).

The emergence of the private pharmaceutical industry has, relatedly, unfolded in parallel with an increase in pressure on public primary care services, manifesting in understaffing and under-resourcing (Sepehri et al., 2003). Before COVID-19, to subsidize the government investment in grassroot public healthcare, facilities were allowed to charge patients for the services provided. This was underpinned by the logic that incorporating elements of the free market would improve the quality of services and promote a more efficient use of resources (Lieberman & Wagstaff, 2009; Thanh et al., 2014). The government also incentivized the development of fully private health facilities as way to 'share the burden' with public healthcare system (Thanh et al., 2014). These facilities tend to

be smaller in size and less likely to provide complicated services such as surgery (Do & Do, 2018), but have increasingly become competitors in the provision of primary healthcare even though patients often pay higher co-payments when using private services (Do et al., 2014). In 2019, there were 21,048 clinics all across the country (Giao et al., 2020), many of which are run by physicians working in public hospitals or community health centers, commonly known as dual-practice (Do & Do, 2018). Within this public-private mix, individuals often visit private community pharmacies as the first point of care, bypassing public primary care. This practice persists despite research showing that the minority who do visit community health center report being provided with high-quality services (Hoa et al., 2019). Over time, this increasingly dominant pattern of visiting private community pharmacies means that it has evolved to become an informal fifth (the lowest) level of healthcare, functioning as a 'reliable' means of accessing immediate care. This pharmacy sector has increasingly replaced community-based primary care facilities in functioning as the initial gatekeeping mechanism to the health care system and public health issues.

In this paper we consider how community pharmacists engage with AMS policy locally in Vietnam, exploring how their everyday practices are entangled in how consumers are able, or not, to access the primary healthcare system.

Method

Design

This qualitative study was embedded within a parent study called V-RESIST (Combating the Emergence and Spread of Antimicrobial Resistant Infectious Diseases in Vietnam). The qualitative study aimed to inform the design and development of an intervention to address AMR in Vietnam. Adopting an interpretivist approach, we conducted 24 semi-structured individual interviews with pharmacists at privately run community pharmacies to explore their understandings of AMR and their practices around the rationing of the sale of antibiotics in the context of AMS implementation.

In addition, we interviewed a smaller number of public pharmacists working at commune health centers for comparative purposes. District hospitals in Vietnam also provide primary, as well as secondary, care services. Both commune level pharmacies and district hospital pharmacies are restricted to be only able to dispense antibiotics with a prescription and are not allowed to sell medications to community members who have not received a related medical examination. This is strictly enforced. We focused on pharmacies within commune health centres to comparatively explore public facilities which operate at the equivalent level to understand the dynamics, and differences, which exist between pharmacy models (i.e. within and outside of the health system) at the community level. We conducted additional qualitative evaluation of AMS implementation at district hospitals, which are not the subject of this paper.

Ethical approval for the study was received in both Vietnam (National Institute of Hygiene and Epidemiology VN01057/IORG0008555) and Australia (University of Sydney 2018/912).

Data collection

Data were collected between April and September 2019. Participants were recruited in selected suburban and rural communes in Ha Noi (north), and Ca Mau (south) provinces. The two provinces were selected by the wider research program as target sites for implementation of AMR intervention in at community level, in part to capture North-South diversity, and based on existing strong collaborations for research with local partners developed over the years which as described was critical for being able to effectively investigate this sensitive topic within communities. Within these communes, the research team (the authors) initially sampled pharmacies based upon initial predetermined criteria (scale of operation, location relative to population density). These pharmacies were identified through a mapping sub-study within the parent study (Beardsley et al., 2023) and selected using

a purposive sampling approach. Interviewers visited pharmacies and invited pharmacists/pharmacy attendants available at that time to participate in an interview. We aimed to capture a diverse range of experiences and qualifications across those offering services. For this reason, the visits were unannounced to ensure maximum variation in who we spoke to, rather than being limited to speaking with only those who were delegated by their employers.

Recruitment coincided with an AMS inspection campaign in the study sites, in which local health authorities were inspecting local pharmacies to enforce the instalment of surveillance system software linking them to national databases for the control of antibiotics supply. This situation hampered our recruitment as pharmacists were often reticent to engage in the research, through inadvertent association with this unconnected campaign. Selected pharmacies deployed various strategies to avoid inspectors such as falsifying closure and operating secretively (for example, only welcoming familiar customers) or making false excuses about the pharmacist's absence. Because of this, in our study we encountered high levels of outright refusals from potential participants whom we approached but were not willing to listen to the explanation of our study which would have distinguished it from broader Government actions. In response, we sought support from our existing research partners working as district healthcare workers and community members who could act as referees for our study and provide guarantees that the interviewers were not connected to any legal enforcement institutions and the data would be protected. This improved participation rates, including some pharmacists who had avoided us subsequently agreeing to participate when we revisited them.

Trained Vietnamese researchers (DHT and TTT) conducted the individual in-depth interviews in a quiet space within the pharmacy where the participant worked. Interviews lasted between 45 and 90 minutes. The interviewers used a flexible topic guide, which covered the key areas of investigation. The guide was refined throughout the data collection process, informed by emerging analysis and also by findings from a parallel qualitative study the team were conducting with community members about their antibiotic use in the same study context (McKinn et al., 2021).

Analysis

Data collection and analysis were iterative. This worked by conducting two to three interviews over a few days and then pausing data collection until these interviews had been analyzed. This initial analysis informed the approach taken to the next group of interviews.

These intensive analytical discussions involved the following steps: (1) writing summaries, within one to two days of the interview, based on the audio recordings and detailed field notes, (2) these summaries were shared among the research team for systematic debriefings. The outcome of these discussions informed ongoing sampling decisions, guided the inclusion of topics to be explored in greater depth within the interviews, and supported our decision as to the point at which thematic saturation had been reached.

Interviews were audio-recorded then transcribed verbatim and translated into English. The data were thematically coded using comment function in Microsoft Word and organized within an Excel spreadsheet to support the development and further refinement of the coding framework. Themes were established by examining the correlations between codes. This process was guided by rich contextual insights generated in other sub-components of the parent study and triangulated with the existing literature (McMahon & Winch, 2018).

Results

Sample

We tried to approach 43 pharmacies in total, but only twenty-eight of them were willing to hear about the study, 24 of whom then agreed to participate in the interview face-to-face. The sample is

Table 1. Distribution of pharmacies by type and sites.

	Ca Mau Province		Ha Noi Capital		
Type	Rural	Sub-Urban	Rural	Sub-Urban	Total
Private	7	5	6	3	21
Public	1		2		3
Total	5	5	8	3	24

outlined in Table 1. Of the four refusals, three were from private pharmacists in the North of the country, and all four gave the reason of 'not having sufficient time to participate. The sample included 18 female and six male qualified pharmacists, all of whom had formal training in pharmacy. Eight participants had a university degree and were chief pharmacists, ten were assistant pharmacists, and the remaining six were trainee pharmacists. Half of the participants were pharmacy owners. The majority of participants worked in privately run pharmacies.

Understanding but failing to comply with AMS policy

The majority of the participants in the study reported that they had developed a clinical understanding of AMR through their formal training, through Internet searches and/or by attending workshops given by the local health authority (e.g. Provincial Office of Drug Administration). However, their awareness of AMR tended to be limited to the clinical consequences of 'overconsumption' of antibiotics for individuals (side effects, treatment relapse, direct and indirect costs for treatment of AMR) and did not encompass a broader understanding of how AMR may contribute to drug-resistant pathogens. When asked about AMR regulations, most participants voiced agreement with the principle of 'restricting' community antibiotics access through prescription only sales, as articulated by the following participant.

> Antibiotics should be used for bacterial infection, its overuse leads to drug resistance, meaning bacteria become resistant, and no other antibiotics can treat severe infections anymore. (Interviewer: how about threats to the community?) Well, honestly, I don't know (HN-013)

However, despite this, the participants also described the dissonance between theory and practice that they frequently experienced. When customers directly requested the antibiotics that they wanted, pharmacists described how they tried to circumvent their customers' requests by explaining the importance of a clinical prescription and trying to engage them in a discussion about why they considered that they needed antibiotics in this specific situation. However, many participants candidly acknowledged that their efforts did not persuade their customers.

> Pharmacists could not explain AMR to people. When I tried to explain, they shouted back at me! We, pharmacists or pharmacy attendants, give up honestly. (CM-001)

Participants described a common pattern of ineffective persuasion and explained how their fruitless efforts over time contributed to their desensitization and indifference towards attempting to comply with AMS guidance. Their perceived incapacity to implement AMS policy and the inadequacy of trying to change practice through public health advocacy was a source of disquiet for many participants. One pharmacist encapsulated the internal tension that she experienced by drawing on a famous quotation from Vietnamese literature - *Chi Pheo* (Nam Cao, 1941/2001) when she said, 'Tao muốn làm người lương thiện! Ai cho tao lương thiện?' – (interpretation in context: 'I want to practice dispensing antibiotics with 'conscience' [professional ethics]! But I am not allowed to do so'.) (CM-014).

Why change failed: commercial resistance

Pharmacists described how their continued sale of antibiotics without prescription was also driven by the recognition that not catering to market demand left them vulnerable to commercial losses.

Knowing that their competitors were selling antibiotics without prescription, they faced a stark reality: the actions needed for appropriate antibiotic dispensing often entailed a negative business cost for their pharmacy. As one participant explained, 'I was forced to sell it". (HN-014).

> Customers come to buy antibiotics without a prescription, I would not sell it and advise them to get a prescription. They say 'why you are saying so much? So, you get more money, right? I'll go get it elsewhere!" They go to a pharmacy right opposite mine. (HN-011)

Consumer resistance to rational sale of antibiotics was also reported in symptom-based consultations. Participants described being under pressure to reduce the time spent counselling customers because commercial expectations mean that they were judged for how efficiently (i.e. how quickly) they could dispense 'effective' medication. Asking 'too many' questions for diagnostic purposes, while essential clinically, was considered undesirable by consumers. Participants described a perceived inverse relationship between clinical responsibility and customer satisfaction.

> When I ask 'many' questions, customers react aggressively. Because asking many questions makes me appear like I don't know how to do my job as a pharmacist. I have to ask quickly and then sell the medicine immediately. (CM-009)

Pharmacists also described the struggles they encountered in ensuring that customers purchased the correct treatment course. In Vietnam, it has become common practice to purchase only a few doses, constituting an incomplete course, in one transaction. Participants described that when they resisted just selling 'one or two days (worth of doses) which the customer considered enough', this was interpreted as commercial exploitation and was, perversely, perceived as an indicator of a pharmacist's greed rather than a marker of responsible practice.

> I asked them to buy a full course of antibiotics, and they talked back 'would selling that extra dose make you richer?' People compliment pharmacists who helped them recover quickly and criticize me for giving them medicine that is slow to take effect. So, other pharmacists just dispense antibiotics to enhance their own (business) reputation (HN-007)

Less directly affected by the principles of private enterprise, pharmacists in community healthcare clinics, were able to refuse to sell antibiotics without a prescription. Even though they could prevent the practice within their pharmacies, they were conscious that this did not stop consumers from obtaining antibiotics from other pharmacies within the neighborhood that adopted a 'customer-first policy'.

> I always asked those who asked for antibiotics about what, whom and how antibiotics are used for. They responded bluntly: 'I have the money, so sell me the medicines!' I never agree to sell antibiotics like that, they gave me an attitude and left. The bigger problem is that they go elsewhere. My dad, who knows I am a health professional, came home one day with a bag of antibiotics [he] bought at a private pharmacy. (HN-004)

Participants described, often regretfully, that within the current health care context, there is 'no distinction between a pharmacist and a shopkeeper' (CM-015). With commercial incentives in place, consumers have sufficient purchasing power to be able to 'silence' pharmacists.

Non-compliance and social obligation: antibiotics as compassionate action

Nearly half of participants described an additional impediment to being able to comply with AMS policy in their dispensing practice, in the form of the socioeconomic conditions and (assumed) needs of customers within the community. They identified various underserved groups within their local community, for example, migrant workers, manual laborers, and farmers, whose needs for antibiotics were driven by their poor living conditions and limited access to formal healthcare and social protection.

There was a sense of pride among participants that their pharmacies operated as a (de-facto) affordable alternative to primary care within the local community. Interviewees believed that selling

antibiotics without a prescription alleviated the cost of accessing formal healthcare for those who struggled to make a living wage. They described how their actions protected their customers from out-of-pocket payments for formal care, but also the indirect costs associated with time off-work and the additional costs of travel. If the costs associated with accessing formal care outweighed the customer's ability to pay, then pharmacists are justified in dispensing antibiotics without prescription as an act of social responsibility to their community.

> The cost is higher if people seek to care appropriately. Poor people have to spend time travelling and waiting, meaning no work. That's why they are afraid of seeing a doctor. So, they buy antibiotics from us, pharmacists. It's best if we can refer them to doctors and stuff, especially with the prescription law. But pharmacists give them antibiotics because the 'cost' would be huge for them otherwise (HN-032)

Such sentiments formed the basis of considerable opposition to prescription mandates among participants. A large number of participants believed that forbidding the dispensing of antibiotics without a prescription essentially forced the vulnerable to take the formal route to accessing antibiotics which rendered them unaffordable. Although cognizant of the risks of unrestricted sales, they considered that enforcing prescription-only sales might prevent many individuals from being able to access any form of care.

> That young mother begged 'this is an old prescription for antibiotics, please help! just give me a moderate amount'. A bricklayer told me, 'I mustn't get ill, please give me some antibiotic pills!' Illness means no work, no food for their families, so they ask me to give them an extremely strong dose of antibiotics just to [be able to] resume working. (HN-012)

Public pharmacists on the other hand were less likely to dispense antibiotics to ease patients' circumstances. This was in part because when customers presented to them with health conditions that exceeded the pharmacist's treatment capacity, their positioning within (rather than outside) the public healthcare system meant that they could arrange formal referrals for their customers.

> Many come to buy antibiotics at our community health center, we invite them inside for a doctor's consultation or refer them go to a higher-level hospital as we can't treat them with our resources. Patients try their best not to see doctors. They just go away. They may fear stopping working, travelling, and not having money. Some older people have no one to accompany them. (CM-010)

However, the majority of private pharmacists, to whom affordable routes to healthcare are less accessible, continued to sell antibiotics, even incomplete courses, as an artefact of beneficence. Such participants questioned the definition of the 'inappropriate' dispensing of antibiotics, recalibrating their actions of selling them without a prescription as a rational and compassionate act of charity. The sale of antibiotics was thus seen by some as implying a moral calculation.

> It (dispensing antibiotics) is like doing charity. The majority of my customers live deep in a remote area. For them, getting a pill is difficult let alone going to a clinic. So, if they need that antibiotic, we need to give it to them, so long as we do so with appropriate instructions. We help them when they really cannot afford doctors" (CM-008)I

As a result, what might be deemed 'irrational' practice around antibiotics from a distance, may locally be configured as a socially obligatory act to compensate for structural shortcomings within the local health system. In contexts where primary healthcare provision was weak or non-exixtent, participants positioned the sale of antibiotic pills without prescription as a means by which for pharmacists can 'help' and 'protect' vulnerable individuals in the communities they serve.

Discussion

We have explored how community pharmacists in Vietnam articulate AMS in their practice. Community pharmacists attempted to act upon knowledge of AMR and AMS but characterized their failure to do so as indicative of the need to balance clinical professional 'responsibilities' with commercial and social needs. This finding highlights that while community pharmacists need to be

involved in the local delivery of AMS policies, there is a need to address the paradox of involving them in public health interventions without providing structural support for their commercial enterprise.

By illuminating what happen when AMS policies collide with local market demand, our findings contribute to the literature emphasizing the broader structural drivers of antibiotic use (Broom et al., 2020, 2021; Denyer Willis & Chandler, 2019; Dixon et al., 2021). The dissonance between AMS in theory and its poor chances of implementation success highlights how structural conditions undermine AMS policies, because insufficient credence is given to the ways in which, and the reasons why, everyday practices operate as forms of resistance. By attending to pharmacists' and consumers' agency, we can also be alerted to the structures which shape their pathways of action (Ortner, 2006; Van der Geest, 2014).

In Vietnam, community pharmacists' irrational practices in respect oft antibiotic sales are a response to meeting the widespread consumer demand for 'powerful and strong' medications (McKinn et al., 2021), which is structurally produced by the profit enterprise and social vulnerabilities in Vietnam's weak primary health provision. Irrational practices operate simultaneously as a mechanism to survive as a business and to contribute to social justice within their community. The confluence of these two intersecting concerns results in a form of 'pragmatic resistance' (Chua, 2012).

The commercial drivers of antibiotic sales have been well documented both in Vietnam (Nga et al., 2014; Nguyen et al., 2019) and elsewhere (Sakeena et al., 2018; Servia-Dopazo & Figueiras, 2018), yet less attention has been paid to the influence of the pharmacist–customer relationship on sales. In this study, we have unpacked how community pharmacists incorporate the perceived socioeconomic position of 'vulnerable' clients into their decision-making about whether and how to ration antibiotic sales, justifying their work as providing an alternative form of care to the more 'costly' formal healthcare. This resonates with research conducted in other settings (Chandler et al., 2017; Ghiga & Stålsby Lundborg, 2016; Nabirye et al., 2023). In this study, community pharmacists tended to be more sensitive to the socioeconomic standing of clients than other perceived characteristics. In particular, although our previous work suggested that antibiotics purchase is highly feminized task (McKinn et al., 2021), we identified a gender-neutral account of pharmacists' encounter with customers.

The impediments to converting AMS knowledge into practices around antibiotic prescribing, selling and consumption reflect a shared experience across country contexts that invites critical reflection on the historical roots of antibiotic use. Craig (2002) has documented how the explosion of Vietnam's pharmaceutical market in the 1990s as part of the economic reforms which prompted the decentralization and privatization of public healthcare, transformed the rationale behind treatment drug use. Increasingly, treatment drugs serve as commodities to 'go almost anywhere [that] commodities can go' (p. 125); and are subject to the local rules and knowledges about how antibiotics are understood to be clinically effective (Craig, 2002). Contemporary practices surrounding antibiotic use in Vietnam reflect their use locally as artefacts of transaction and benevolence in response to the moral dilemmas created by commodification and the pharmaceuticalization of care (Abraham, 2010; Claassen, 2011). Research in countries such as India and Indonesia, where (partial) market-drive healthcare models act as bandages to manage resource constraints, similarly show that community dispensers report conflicting moral challenges in safeguarding antibiotic use (Broom & Doron, 2020; Ferdiana et al., 2021; Limato et al., 2022).

Paying attention to the moral dimensions that shape the prescribing and dispensing patterns of private pharmacists is crucial given current efforts to decentralize prescriptive authority to include community pharmacists, in which they are allowed to prescribe medication which previously required physician prescription so as to address public health issues (Thomson et al., 2019). The moral pressure in AMR provides a lesson to reflect on pharmacists' prescribing practices of other drugs, such as may be the case when pharmacists moderate access to emergency contraceptives or methadone (Chaar et al., 2013; Scendoni et al., 2023).

Policy implications

While community pharmacists are situated as the 'gatekeepers' in ensuring enhanced AMS, on their own they have little power to shut the gate. Antibiotics will likely continue to flow unrationed in a landscape where the pharmaceutical market can profit from weak primary healthcare provision. Even when AMS is working well within the public health system, if this system fails to reach the majority of people, then its impact is limited. Meanwhile, people are pushed further into the under-regulated private sector where antibiotics serve as an alternative form of healthcare for those who might otherwise be excluded.

We argue that community pharmacists can be agents of change, but to be productive anchors that can orient consumers towards appropriate pathways to antibiotic use, they need to be supported by enabling conditions, such as substantial investment in infrastructure to rejuvenate primary health in Vietnam, in order to realize this. AMS requires much more than education and regulation, it demands structural support and fundamental reform of primary healthcare systems (Nguyen, 2022). In this respect, instead of focusing on tweaking and monitoring behaviors, the sustained and structural shifts to stem the scale of the threat, as Dixon argues, should be guided by re-centering frontline prescribers so that they can provide 'good' care without the constant need to resort to antibiotics (Dixon et al., 2021).

There exist tensions and ambiguities about whether participants' claims to deliver social justice may best serve their commercial interests. However, it is important to take seriously both the commercial and social factors shaping resistance to AMS policies. To redress the current impasse, and 'rationalize' antibiotic use, AMR-control policies targeting community pharmacies need to identify (1) the incentives and support mechanisms that need to be in place to reduce non-prescription sales and re-align community pharmacists' business models with public health goals; and (2) how private pharmacies can function as part of the primary healthcare system with clearer benefits and responsibilities defined.

Together, these findings echo the radical call for a solidarity-based model of responding to AMR and to effect a shift away from individualized corrective AMS to a more institutionalized, relational and collective approach (Broom, 2021). While this may sound dramatic it is not only necessary but feasible. Historically, pharmacists and community health centres have operated as gatekeepers for public health concerns and have provided affordable and accessible care to much of the Vietnamese population (Hoa et al., 2020). To enhance community pharmacy's role in the fight against AMR, we should learn lessons from controlling the COVID-19 outbreak in Vietnam and elsewhere which have also shown us that progress towards comprehensively achieving public health goals requires engaging with and mobilising the powerful influence and extensive reach of grassroots healthcare networks (Tran et al., 2020; Zhou et al., 2023).

Strengths and limitations

The small-scale nature of this study inevitably, limits the overall generalizability of the findings, but this was not its primary purpose. Instead, it was to explore the perspectives of community pharmacists, a key, but commonly neglected, moderator of antibiotic dispensing. Our sampling was guided by the insights generated from a large-scale pharmacy mapping exercise, a sub-study within the VRESIST parent study (Beardsley et al., 2023; Zawahir et al., 2022). This enabled us to include a diverse range of pharmacy types. Although we focus here on the perspectives of pharmacists, our parallel work with community members (McKinn et al., 2021) informed the development of the questions asked and the enquiries made, which were attentive to everyday practices. This may have strengthened the trust that participants had in our appreciation of how the local context constrained their actions, which in turn may have prompted accounts which were potentially less inhibited by social desirability bias.

We recognize that there exists a diverse range of community formal and informal prescribers/dispensers. In the time and with the resources available, we were not able to capture the full range of perspectives, with data being collected, for example, from pharmacists who might characterize themselves as 'shopkeepers'. These issues were, however, explored, to a limited extent, using standardized patient surveys, in a linked sub-study (Zawahir et al., 2022). While this group warrants further qualitative enquiry, the focus in this paper on qualified pharmacists demonstrates the deficits of existing forms of AMR intervention within the more formally recognized pharmacy sector. Although our analysis noted the influence of clients' perceived socioeconomic status on dispensing practices, we encourage the use of intersectional lenses and appropriate methods to explore the dynamism of community prescribers' interaction with a diverse client base showing marked variation in gender, class, and ethnicity, among other variables.

Conclusion

Community pharmacists in this study believed that their attempts to practice in accordance with AMS policies fell short because inadequate attention is paid to easing the tensions between their public health responsibilities and their economic and social obligations. How competing needs can best be incorporated into AMS policies so as to incentivize cooperation and build alliances is a vital next step in AMS policy reform in order to improve its effectiveness. More broadly, these findings add to the growing evidence that resolving AMR resolutions requires structural reform to redress the current challenges posed by limited access to primary healthcare, as a means to effectively reduce the current reliance on antibiotic dispensing as a business strategy and alternate form of 'care'.

Note

1. We use this term in line with broad definition of rational use of medicines provided by WHO and the World Bank to encapsulate wide range of practices around antibiotics including inappropriate dosages, self-medication, and as treatment for non-bacterial illnesses, and is subject to individual context which will be discussed later (Ofori-Asenso & Agyeman, 2016). The term irrational use' is also used also to avoid the fairly common misconception in AMR that the misuse of antibiotics is equivalent to their excessive use (McKinn et al., 2021).

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No potential conflict of interest was reported by the author(s).

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Data availability statement

The participants of this study did not provide written consent for their data to be shared publicly because of the sensitive nature of the research, so supporting data are not available.

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